

# PATENT COOPERATION TREATY

From the  
INTERNATIONAL SEARCHING AUTHORITY

**TRANSLATION**

PCT

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

To:

Date of mailing  
(day/month/year)

Applicant's or agent's file reference

**A7143PCT**

**FOR FURTHER ACTION**

See paragraph 2 below

International application No.

**PCT/JP2005/002437**

International filing date (day/month/year)

**17.02.2005**

Priority date (day/month/year)

**13.04.2004**

International Patent Classification (IPC) or both national classification and IPC

Applicant

**ISHIKAWAJIMA-HARIMA HEAVY INDUSTRIES CO., LTD.**

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/JP

Authorized officer

Facsimile No.

Telephone No.

WRITTEN OPINION OF THE  
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International application No.

PCT/JP2005/002437

Box No. I      Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.  
☐ This opinion has been established on the basis of a translation from the original language into the following language  
\_\_\_\_\_, which is the language of a translation furnished for the purposes of international search (under Rule 12.3 and 23.1(b)).
2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
  - a. type of material  
☐ a sequence listing  
☐ table(s) related to the sequence listing
  - b. format of material  
☐ in written format  
☐ in computer readable form
  - c. time of filing/furnishing  
☐ contained in the international application as filed.  
☐ filed together with the international application in computer readable form.  
☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

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PCT/JP2005/002437

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	3, 4, 7, 8	YES
	Claims	1, 2, 5, 6	NO
Inventive step (IS)	Claims		YES
	Claims	1-8	NO
Industrial applicability (IA)	Claims	1-8	YES
	Claims		NO

2. Citations and explanations:

Document 1: JP 2001-10871 A (Oji Paper Co., Ltd.), 16 January 2001, full text (Family: none)

Document 2: JP 2000-154066 A (Research Institute of Advanced Material Gas-Generator, Ltd.), 06 June 2000, paragraphs 0007-0015, 0030-0031 & US 2001/8865 A1 & EP 987232 A2

Document 1 cited in the ISR describes a porous silicon carbide fibrous structure having an apparent density of  $0.05-1.0\text{g/cm}^3$ , obtained by forming a fibrous molding sheet etc. from short fibers of silicon carbide, then impregnating with silica gel etc. as a binder, drying and sintering.

Therefore, because the fiber-reinforced heat-resistant sound-absorbing material in the inventions of the present application (claims 1, 2, 5, 6) does not differ from this structure in terms of materials, it does not appear to be novel or to involve an inventive step.

Next, document 2 describes, in relation to an inorganic fiber-reinforced high-performance ceramic-based composite material, a main crystalline phase of barium osumilite glass ceramic as an example of the matrix oxide moldings, the sol-gel method as an example of the molding method for the oxide moldings, and silicon carbide-based fibers comprising Si-Al-C-O as an example of inorganic fibers.

In addition, changing the fibers and binder in the structure described in document 1 to those described in document 2 could be easily achieved by a party skilled in the art.

Therefore, the inventions of the present application (claims 3, 4, 7, 8) do not appear to involve an inventive step.